

0.55 mm. long; front wings with two-branched media (but showing a decided tendency to abort the second branch in many cases); hind wings with both media and cubitus present (occasionally either is absent); abdomen moderately broad; cornicles slightly more than raised pores on moderately swollen bases; cauda prominent, dusky, tapering gradually, and armed with a number of fine sensilla; anal plate dusky and broadly rounded.

Type locality, campus of the Utah Agricultural College, Logan.

In addition to the collection of the writer, cotypes are in the collections of the U. S. National Museum and the Utah Agricultural Experiment Station.

#### **Aphid bonnecillensis** Knowlton

In examining material in the aphid collection of Mr. A. C. Burrill, two slides of this species were found, collected on the edge of Soap Lake, Washington, August 16, 1919. The writer collected this form at Malad, Idaho, on July 17, 1928.

During the latter part of September, 1928, winged and wingless forms were collected at Goshen and at Delta, Utah. These are the first fall alates collected by the writer. The wingless forms taken in the fall are a faded yellowish-green and resemble the faded leaves of the greasewood as closely as the darker spring forms resemble the darker coloring of the plant in the early part of the season.

*Alate vivipara* (fall migrant).—Size small, 1.12 to 1.2 mm. long; rostrum long, extending between third coxae; antenna greenish to slightly dusky and slightly more than half the length of the body; antennal III, 0.17 to 0.19 mm. long, and armed with 2 to 5 round sensoria (usually with 4 or 5); IV, 0.11 to 0.13 mm.; V, 0.11 to 0.13 mm. VI, 0.09 + 0.07 to 0.95 + 0.09 mm.; wing venation normal; legs short; hind tibia 0.45 mm. long; cornicles short, 0.067 to 0.085 mm. long; cauda long and tapering.

(To be continued)

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#### **SEMI-TROPICAL ARMY WORM OUTBREAK**

The outbreak of *Xylomyges eridania* Cramer noted in our last issue persisted up into November, but the numbers of the worms gradually diminished. During November their attacks were most noticeable on snap beans for the fall market. The behavior of the worms on beans was rather characteristic. They much

preferred the young pods to the leaves of the beans. They ate large holes in the pods, much larger than the entrance holes of the corn earworm. Indeed, where the worms were abundant the pods were pretty thoroly consumed.

Some damage was also done to the fall crop of beans by the cabbage looper (*Autographa brassicae* Riley). Unlike the army worms, these caterpillars confined their attacks largely to the leaves, where they fed usually on the under side.

Due perhaps to the depredations of the Mexican bean beetle in the states further north, fall grown beans have been bringing a pretty fair price in Florida. It is quite possible that this condition may persist for several years.

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## THE SCARABAEIDAE OF FLORIDA

By W. S. BLATCHLEY

Dunedin, Florida

(Continued from page 46)

### Subfamily TROGINAE

Oblong, convex, dull brown or blackish beetles of medium or small size covered with a thick dirt-colored crust. They have the antennae 9- or 10-jointed, club 3-jointed; elytra roughly sculptured and usually bearing rows of small tubercles; abdomen covered by the elytra; ventral segments 5, free; side pieces of the mesothorax not reaching the rounded contiguous middle coxae. They live under or about the skins and bones of carrion, old hides, feathers, etc. All our eastern species belong to a single genus.

### Genus XXIII. TROX Fabricius

This genus, sufficiently characterized above, is represented in Florida by nine of the 21 known North American species. Unless cleaned of their usual encrusted coat of dirt they are very difficult to name. In the first four species the scutellum is spear-shaped and the length 12 or more mm.

#### 76. (13328). *T. scabrosus* Beauv.

Length 15-18 mm. Dull blackish-brown, heavily encrusted with a brownish opaque coating; first joint of antennae with dark brown hairs, club dark; elytra with rows of oblong tubercles, which are tomentose above; between each pair of these a row of smaller tubercles and each side of these a row of granules.